



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,178	09/04/2002	Masaki Yamazaki	F-7262	8528

7590 04/06/2004

Jordan & Hamburg
122 East 42nd Street
New York, NY 10168

EXAMINER

LUGO, CARLOS

ART UNIT	PAPER NUMBER
----------	--------------

3677

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/018,178	Applicant(s) YAMAZAKI, MASAKI	
	Examiner Carlos Lugo	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-10 and 27-30 is/are allowed.
- 6) ☒ Claim(s) 1-5, 11, 13-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to applicant's amendment filed on January 12, 2004.

Claim Objections

2. **Claim 29 is objected** to because of the following informalities:

- Change "claims 6 through 10" as -claims 6 through 9- (as suggested by the applicant).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4,11,13-15,17/15 and 18-26 are rejected** under 35 U.S.C. 103(a) as being unpatentable over JP Pat No 56,143612 (JP '612) in view of US Pat No 5,626,449 to McKinlay (McKinlay '449) and further in view of US Pat No 3,263,727 to Herpolsheimer.

Regarding claims 1,4,11,13-15,17/15 and 18-26, JP '612 discloses a screw mechanism having a member (5) to be tightened by screwing one screw member (11) on a tightening side to another screw member (12 and 13) comprising structures having a pair of inclined surfaces (8) interposed between the two screw members in a mutually contacted state. The inclined surfaces circle around in a

spiral form. At the ends of the spiral form, a tier face (9) is located in an axial direction.

However, JP fails to disclose that the lead of the spiral is smaller than the lead of the screw and that the ends of the spiral have flat surfaces.

McKinlay '449 teaches that is known in the art to have the lead of the spiral (34 and 36) is smaller than the lead of the screw (Col. 4 Lines 55-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a spiral surface, as taught by McKinlay '449, into a device as described by JP '612, in order to reduce the amount of torque applied to the assembly.

Herpolsheimer teaches that is known in the art to have flat surfaces (27 and 29) located at spiral forms (24) and a tier face between them (Figures 3 and 5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have flat surfaces, as taught by Herpolsheimer, into a device as described by JP '612, in order to provide a stop surface (bottom flat surface) or a surface to allow the insertion or engagement with the other washer (top flat surface).

As to claim 2, JP '612 discloses that the inclined surfaces are formed at a pair of washers (2a and 2b).

As to claim 3, JP '612 fails to disclose that the inclined surface can be formed on the screw member and the other one on a washer.

McKinlay '449 teaches that the inclined surface can be formed on the screw member (14) and the other one on a washer (16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the inclined surfaces, as taught by McKinlay '449, into a device as described by JP '612, because it is a design choice that will not affect the threaded engagement.

5. **Claim 5 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Japan No 56-143612 (JP '612) in view of US Pat No 5,626,449 to McKinlay (McKinlay '449), in view of US Pat No 3,263,727 to Herpolsheimer and further in view of US Pat No 5,222,849 to Walton.

JP '612, as modified by McKinlay '449 and Herpolsheimer, fails to disclose code or symbols formed on the washer.

Walton teaches that is known in the art to have a threaded fastener assembly comprising means (28 and 40) to provide visual indication.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have means for visual indication, as taught by Walton, into a device as described by JP '612, as modified by McKinlay '449 and Herpolsheimer, in order to provide visual indication of the load suminstrated.

6. **Claims 16 and 17/16 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Japan No 56-143612 (JP '612) in view of US Pat No 5,626,449 to McKinlay (McKinlay '449), in view of US Pat No 3,263,727 to Herpolsheimer and further in view of US Pat No 5,180,268 to Richardson.

Art Unit: 3677

JP '612, as modified by McKinlay '449 and Herpolsheimer, fails to disclose that the washers include stoppers.

Richardson teaches that is known in the art to have washers (24 and 26) having stoppers (60 and 62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have stoppers, as taught by Richardson, into a device as described by JP '612, as modified by McKinlay '449 and Herpolsheimer, in order to prevent the washer from rotating (opposite direction from the tightening direction).

Allowable Subject Matter

7. **Claims 6,7 and 27 are allowed.** Claims 8-10 and 28-30 are also allowed because the claims depend from claims 6 and 7.

Response to Arguments

8. Applicant's arguments filed on January 12, 2004 have been fully considered but they are not persuasive.

Regarding applicant's arguments that JP '612 does not teach flat surfaces (Page 24 Line 9), the new rejection in view of JP '612, as modified by McKinlay '449 and Herpolsheimer, disclose this limitation.

As to applicant's arguments that JP '612, as modified by McKinlay '449, fails to disclose the new limitations in claims 15,18 and 19 (Page 24 Line 15), the new rejection in view of JP '612, as modified by McKinlay '449 and Herpolsheimer, disclose this limitation.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lugo whose telephone number is 703-305-9747. The examiner can normally be reached on 9-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

Application/Control Number: 10/018,178
Art Unit: 3677

Page 7

Carlos Lugo
Examiner
Art Unit 3677

April 2, 2004.



ROBERT J. SANDY
PRIMARY EXAMINER